



PATENT

#9/8x702  
Appeal  
Brief  
1/3/03  
Hayes

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE APPLICATION OF : Edward J. Thomas, et al.  
FOR: : **UNDERCABINET LIGHTING WITH  
LIGHT EMITTING DIODE SOURCE**  
SERIAL NO. : 09/604,468  
FILED : June 27, 2000  
EXAMINER : TRUONG, B.  
ART UNIT : 2875  
LAST OFFICE ACTION : June 28, 2002  
ATTORNEY DOCKET NO. : LD 11108  
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Cleveland, Ohio 44114-2518

**APPEAL BRIEF UNDER 37 C.F.R. 1.192**

ATTENTION: Board of Patent Appeals and Interferences  
Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

This brief is in furtherance of the Notice of Appeal that was filed in this case on June 25, 2002.

The fees required under § 1.17, and any required petition for extension of time for filing this brief and fees therefor, are dealt with in the accompanying Transmittal of Appeal Brief.

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Appellant files herewith an Appeal Brief in connection with the above-identified application, wherein claims 1-29 were finally rejected in the Office Action of March 25, 2002. What follows is Appellant's Appeal Brief submitted in triplicate in accordance with 37 C.F.R. §1.192(a).

**I. REAL PARTY IN INTEREST (37 C.F.R. §1.192(c)(1))**

This application is assigned to General Electric Company. The assignment is recorded in the United States Patent Office at Reel 010925, Frame 0722.

**II. RELATED APPEALS AND INTERFERENCES (37 C.F.R. §1.192(c)(2))**

This application is not involved in any related appeals or interferences.

**III. STATUS OF THE CLAIMS (37 C.F.R. §1.192(c)(3))**

Claims 11, 12 and 15-29 have been finally rejected in the Office Action mailed March 25, 2002, as being unpatentable under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

Claims 1, 8-10, 13-15, 22-24 and 27-29 were finally rejected under §103(a) as being unpatentable over Blackman (U.S. Pat. No. 5,548,494) in view of Hed (U.S. Pat. No. 5,301,090).

Claims 2-7 and 16-21 were finally rejected under §103(a) as being unpatentable over Blackman in view of Hed and Hipp (U.S. Pat. No. 5,998,928).

Claims 11 and 25 were finally rejected under §103(a) as being unpatentable over Blackman in view of Hed and Splane (U.S. Pat. No. 5,791,768).

Claims 12 and 26 were finally rejected under §103(a) as being unpatentable over Blackman in view of Hed and Gordin (U.S. Pat. No. 5,887,969).

**IV. STATUS OF THE AMENDMENTS (37 C.F.R. §1.192(c)(4))**

The appellant filed an amendment on December 13, 2001 prior to the Final Office Action of March 25, 2002. The appellant filed a proposed amendment after final

rejection under 37 C.F.R. §1.116 on May 28, 2002. An Advisory Action mailed June 28, 2002 indicated that the proposed amendments had not been entered. The claims in the appendix include only the claims as amended by the amendment dated December 13, 2001.

**V. SUMMARY OF THE INVENTION (37 C.F.R. §1.192(c)(5))**

The invention relates to an undercabinet lighting assembly including a housing 10 enclosing the necessary lighting components and circuitry. A plurality of light emitting diodes (LEDs) 26 are mounted within the housing 10. Each LED array includes an optical assembly 40 for focusing and dispersing an LED beam emitted by the LED array. A focusing knob 42 is provided to adjust the lens or LED array. A switch 44 coupled to a variable resistor 46 is provided for allowing variable optical output. The switch can be designed having a step level variable control or an infinite variable control.

**VI. ISSUES (37 C.F.R. §1.192(c)(6))**

1. Whether claims 11, 12 and 15-29 were properly rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

2. Whether claims 1, 8-10, 13-15, 22-24 and 27-29 are obvious under 35 U.S.C. §103(a) as being unpatentable over Blackman (U.S. Pat. No. 5,548,494) in view of Hed (U.S. Pat. No. 5,301,090).

3. Whether claims 4, 5, 18 and 19 are obvious under 35 U.S.C. §103(a) as being unpatentable over Blackman in view of Hed and Hipp (U.S. Pat. No. 5,998,928).

**VII. GROUPING OF CLAIMS (37 C.F.R. §1.192(c)(7))**

For the reasons articulated in the Arguments Section, each of the independent claims, 1, 15 and 29 stand or fall separately. Furthermore, dependent claims 4, 5, 14, 18, 19, and 28 stand or fall separately from their respective parent claim.

## **VIII. ARGUMENTS (37 C.F.R. §1.192(c)(8))**

### **ISSUE #1**

The examiner improperly rejected claims 11, 12, and 15-29 under 35 U.S.C. §112, second paragraph. With regard to claim 11, the examiner asserted that the appellant had "not clearly described how the optical assembly being [sic] selectively adjustable for focusing and dispersing the LED beam." To satisfy §112, second paragraph, a claim must particularly point out and distinctly claim the subject matter that the applicant regards as the invention. The purpose of the claim is not to explain the technology or how it works; the purpose of a claim is to state the legal boundaries of the patent grant. See *S3, Inc. V. nVIDIA Corp.*, 59 USPQ2d 1745 (Fed. Cir. 2001). Accordingly, the appellant is not required to explain how the technology works in the claim, i.e. how the optical assembly is selectively adjustable. The appellant need only recite the legal boundaries of the invention, which have been distinctly claimed as an optical assembly that is selectively adjustable for focusing and dispersing the LED beam.

The examiner erred finding claim 12 noncompliant with §112, second paragraph. The examiner stated that the appellant failed to describe how the light source is selectively moveable. As stated above, a claim need not explain how an invention works. *53, Inc.*, 59 USPQ2d at 1747. The claim need only define the legal boundaries of the patent grant. In claim 12, the appellant defined the invention as including a light source "selectively moveable for focusing and dispersing the LED beam as desired." Accordingly, the appellant defined the legal boundaries of the invention, and thus notified those skilled in the art the boundaries of the patent grant.

The examiner erred finding claim 15 violative of §112, second paragraph. The examiner argued noncompliance with the statute because the appellant did not clearly describe "how the first plurality of LEDs uses the battery source upon the failure of AC power[.]" An applicant need only claim his invention with enough specificity so that one skilled in the art receives notice of the inventor's claim. MPEP §2171. In a claim, an applicant need not explain the technology or how it works. See *S3, Inc.*, 59 USPQ2d at 1747. In claim 15, the appellant's claim recites that the LED devices are "powered by an AC power source and a battery source upon failure of the AC power source." One skilled

in the art is on notice as to the legal boundaries of the appellant's invention, and the appellant need do no more. Accordingly, claim 15, and those dependant from it, satisfy §112, second paragraph.

The examiner improperly rejected claim 29 under §112, second paragraph. The examiner asserted that the appellant had not clearly described the "phosphor devices." The appellant respectfully disagrees. On page two of the application, the appellant recites that blue and UV LEDs can generate white light by applying luminescent phosphor materials on top of the LED. Accordingly, though not limiting the phosphor devices to only those described in the specification, the appellant has particularly claimed a phosphor device.

## **ISSUE #2**

The examiner erred when finding claims 1, 8-10, 13-15, 22-24 and 27-29 unpatentable under 35 U.S.C. §103(a) over Blackman (U.S. Pat. No. 5,548,494) in view of Hed (U.S. Pat. No. 5,301,090). Specifically regarding claim 1, the examiner failed to state a prima facie case for obviousness. To establish a prima facie case for obviousness, the examiner must show, among other things, that the prior art references teach or show every claimed limitation. Claim 1 recites "an optical assembly operatively associated with the housing for focusing and dispersing the LED beam traveling through said optical assembly to a desired light contour." Neither Blackman nor Hed, either individually or properly combined, teach or suggest such an optical assembly.

The examiner mistakenly relies on Blackman as showing the appellant's optical assembly. The examiner argues that the translucent diffuser cover 402 acts as the optical assembly as claimed by the appellant. A diffuser, as defined in *Webster's II New College Dictionary*, is something to make less brilliant or to scatter. In contrast, the appellant's optical assembly as claimed focuses the LED beam, which is the exact opposite of what Blackman teaches. The Examiner has failed to find a teaching for every limitation in the appellant's claim, therefore, the Examiner has failed to establish a prima facie case for obviousness.

Furthermore, on page 12 of the Final Office action, the examiner discusses the patentability of the present invention with respect to the light diffuser of Hed compared to the optical assembly of claim 1. However the examiner asserts that the optical assembly is not clearly defined, and cannot therefore apparently support patentability. Accordingly, the examiner does not reject claim 1 in view of a clear prior art rejection. Moreover, the Examiner effectively rejects the subject claim limitation for being indefinite. Appellants assert that a device to focus light is not an indefinite claim requirement as any skilled artisan could provide this feature once the invention was in hand.

Nonetheless, the appellant responds to the examiner's response to arguments as a rejection under §112, second paragraph. As stated above, for a claim to comport with §112, second paragraph, it must apprise those skilled in the art of the scope of the invention, and no more. See *Miles Laboratories, Inc. v. Shandon*, 27 USPQ2d 1293 (Fed. Cir. 1993). Claim 1 recites an optical assembly "for focusing and dispersing the LED beam." The claim need not explain a detailed focusing and dispersing apparatus. See *S3, Inc.*, 59 USPQ2d at 1748. Moreover, the skilled artisan is capable of such design. Accordingly, claim 1, and those depending from it, patentably define over the cited references.

The examiner erred when finding claims 14 and 28 unpatentable over Blackman in view of Hed. The examiner has not established a prima facie case for obviousness. To establish a prima facie case for obviousness, the examiner must show, among other things, some suggestion or motivation to combine the prior art references. Claims 14 and 28 recite that the housing is formed of a flexible material. To argue a lack of patentability, the examiner provides the conclusory statement that "Hed shows the use of flexible materials." Office Action mailed March 25, 2002, page 6.

The examiner improperly combined Blackman and Hed when rejecting claims 14 and 28. Combining the flexible material of Hed with the housing of Blackman, would render the Blackman light fixture unsatisfactory for its intended purpose. The primary object of the Blackman invention was "to provide an undercabinet lighting fixture having a detachable flashlight component." (Col. 2, lines 7-8). A detachable flashlight can not

easily mount to a flexible lighting fixture housing. Furthermore, an electronic connection between the detachable flashlight and a flexible lighting fixture, so that the batteries of the flashlight could recharge while not in use, would be even more difficult than merely mounting the flashlight to the housing. Accordingly, combining the Blackman reference and the Hed reference in such a way to make claims 14 and 28 obvious would destroy the intended function of Blackman. Therefore, claims 14 and 28 are nonobvious in view of the two references.

The examiner erred when rejecting claim 15 as being unpatentable over Blackman in view of Hed. The examiner failed to show that the references taught or suggested each of the claimed limitations of claim 15, which is required to support a prima facie case for obviousness. Claim 15 recites that the first plurality of LEDs are "powered by an AC power source and a battery source upon failure of the AC power source." The examiner states that Blackman teaches "switching to battery power when the AC power is failure [sic]." Office Action mailed March 25, 2002, page 12.

That Blackman teaches switching to battery power when the AC power has failed does not teach the appellant's claim limitation. Claim 15 requires the LEDs to be powered by an AC power source and a battery source upon failure of the AC power source. Blackman teaches that when the AC power is no longer delivered to the fluorescent light, the detachable flashlight is powered by the batteries. These are two distinct light sources. While the flashlight may be powered by a battery upon the failure of the AC power source, the AC power source never powers the flashlight. The only power that the flashlight bulb receives is DC power from the batteries. Blackman does not teach the circuitry of the flashlight being capable of handling both AC and DC power. The Blackman reference fails to teach or suggest a light source that is powered by an AC power source *and* a battery source upon failure of the AC power. In contrast, the present claim requires the LEDs to be powered by both AC and DC. Accordingly, claim 15 is patentable over Blackman in view of Hed.

The examiner erred when finding claim 29 unpatentable under §103(a) over Blackman in view of Hed. The Examiner failed to show that the references properly combined teach or show every claimed limitation. Claim 29 recites that the LEDs are

"powered by an AC power source and a battery source upon failure of the AC power source." As stated with regard to claim 15, Blackman teaches a detachable flashlight powered by a battery source upon failure of the AC power source. The detachable flashlight bulb is never powered by the AC power source. The AC power source delivers power to a separate fluorescent light, a teaching which does not anticipate nor suggest the present claim.

Furthermore, claim 29 recites that the optical assembly focuses and disperses the LED beam. As discussed with regard to claim 1, the translucent diffuser cover of Hed makes the light less brilliant, it does not focus the light source. Accordingly, claim 29 defines over the cited references.

### **ISSUE #3**

The examiner improperly rejected claims 4, 5, 18 and 19. The examiner erred when rejecting claims 4 and 18 under §103(a) as being unpatentable over Blackman in view of Hed and Hipp (U.S. Pat. No. 5,998,928). To establish a prima facie case of obviousness, an examiner must show, among other things, that the prior art references, properly combined, suggest or teach all the claim limitations. Claims 4 and 18 recite a switch that provides a step level variable control. The examiner argues that Hed shows the use of a controller 52 as a switch to control the relative intensities of the light source.

The controller in Hed does not teach or suggest the claimed limitation in claims 4 and 18. The controller in Hed "controls the power to each group of light source within the light bar 45." (Col. 9, lines 66-67). The controller in Hed does not teach a step level variable control. The controller in Hed controls the chromacity of the luminaire. The chromacity refers to a desired color, as opposed to a level of illumination.

Furthermore, assuming that Hed shows the use of a controller to control the relative intensities of the light sources, as argued by the examiner, Hed fails to teach the claim limitation. Claims 4 and 18 recite the limitation where a switch that provides a step level control variable. The step level control provides for distinct levels of illumination, which is not shown in the Hed reference. Accordingly, claims 4 and 18 define over the cited references.



The examiner erred when rejecting claims 5 and 19 under §103(a) in view of Blackman, Hedd and Hip. The references, as combined by the examiner, fail to teach or suggest the limitations of claims 5 and 19. Claims 5 and 19 recite the "the switch has a first level adapted to provide partial illumination equivalent to night-light functionality and a second level adapted to provide full illumination." The examiner relies on Blackman as teaching such a limitation.

The examiner erred when relying on Blackman to show the limitation of claim 5 and 19. The examiner stated that Blackman discloses a photocell sensor to turn on and off a night light assembly. Blackman may disclose such a photocell sensor, but Blackman fails to disclose the limitation of claims 5 and 19. Particularly, the switch in claim 5 controls the illumination of the LEDs of claim 1. In Blackman the photocell sensor controls the illumination of a night light between an on and off position. The fluorescent light in Blackman provides the full illumination and the night light provides a partial illumination. Therefore, Blackman fails to teach a switch to control a single light between a partial and full illumination. Accordingly, claims 5 and 19 patentably define over the cited references.

### CONCLUSION

In view of the above, the appellant submits that claims 1-29 are patentable over the cited references. Accordingly, it is respectfully requested that the examiner's rejections be reversed.

Respectfully submitted,  
FAY, SHARPE, FAGAN,  
MINNICH & MCKEE, LLP

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**IX. APPENDIX OF CLAIMS (37 C.F.R. §1.192(c)(9))**

1. An undercabinet lighting assembly comprising:
  - a housing;
  - a first plurality of Light Emitting Diodes (LEDs) mounted within the housing forming at least one array of LEDs, the LEDs generating an LED beam and serving as a light source;
  - an optical assembly operatively associated with the housing for focusing and dispersing the LED beam traveling through said optical assembly to a desired light contour; and
  - a fixing apparatus disposed on a surface of the housing for attaching the undercabinet lighting assembly to an associated structure.
2. The undercabinet lighting assembly according to claim 1, further comprising a switch coupled to a variable resistor for controlling the level of optical output.
3. The undercabinet lighting assembly according to claim 2, wherein the switch is adapted to selectively turn on and off any select number of LEDs within the array of LEDs.
4. The undercabinet lighting assembly according to claim 2, wherein the switch provides a step level variable control having at least two distinct levels of illumination.
5. The undercabinet lighting assembly according to claim 4, wherein the switch has a first level adapted to provide partial illumination equivalent to night-light functionality and a second level adapted to provide full illumination.

6. The undercabinet lighting assembly according to claim 2, wherein the switch operates as a rheostat having continuous variable control.

7. The undercabinet lighting assembly according to claim 6, wherein the switch further includes a step level variable control thereby allowing a user to choose between a step level mode of operation and a rheostat mode of operation.

8. The undercabinet lighting assembly according to claim 1, wherein the first plurality of LEDs have multiple colors of spectral output for achieving desired light output, light level, and beam characteristics.

9. The undercabinet lighting assembly according to claim 1, further comprising a battery pack having a battery source enclosed by the fixture housing for providing back up power and emergency lighting.

10. The undercabinet lighting assembly according to claim 9, wherein the battery source automatically provides power to the undercabinet lighting assembly upon primary power failure.

11. The undercabinet lighting assembly according to claim 1, wherein the optical assembly is continuous and encapsulates the LED array, and is selectively adjustable for focusing and dispersing the LED beam as desired.

12. The undercabinet lighting assembly according to claim 1, wherein the optical assembly encapsulates the LED array and is fixed and the array of LEDs serving as the light source is selectively moveable for focusing and dispersing the LED beam as desired.

13. The undercabinet lighting assembly according to claim 1, further comprising a second plurality of LEDs for providing lower levels of illumination, the second plurality of LEDs being separate and distinct from the first plurality of LEDs, the second plurality of LEDs adapted to automatically turn on upon primary power failure.

14. The undercabinet lighting assembly according to claim 1, wherein the housing is formed from a flexible material allowing the undercabinet lighting assembly to adopt a desired shape.

15. An undercabinet lighting assembly comprising:  
a housing; and  
a first plurality of Light Emitting Diodes (LEDs) mounted within the fixture housing forming at least one array of LEDs, the array of LEDs generating an LED beam and serving as a light source, said plurality of devices being powered by an AC power source and a battery source upon failure of the AC power source.

16. The undercabinet lighting assembly according to claim 15, further comprising a switch formed from a variable resistor for controlling the level of optical output.

17. The undercabinet lighting assembly according to claim 16, wherein the switch is adapted to selectively turn on and off any select number of LED's within the at least one array of LED's, thereby allowing a user to choose from several different levels of illumination.

18. The undercabinet lighting assembly according to claim 16, wherein the switch operates as a step level variable control having at least two distinct levels of illumination.

19. The undercabinet lighting assembly according to claim 18, wherein the switch has a first level of illumination adapted to provide partial illumination equivalent to night-light functionality and a second level of illumination adapted to provide full illumination.

20. The undercabinet lighting assembly according to claim 16, wherein the switch operates as a rheostat having continuous variable control.

21. The undercabinet lighting assembly according to claim 20, wherein the switch further includes a step level variable control thereby allowing a user to choose between a step level mode of operation and a rheostat mode of operation.

22. The undercabinet lighting assembly according to claim 15, wherein the first plurality of LEDs have multiple colors of spectral output for achieving desired light output, light level, and beam characteristics.

23. The undercabinet lighting assembly according to claim 15, further comprising a battery pack having a battery source enclosed by the housing for providing back up power and emergency lighting.

24. The undercabinet lighting assembly according to claim 23, wherein the battery source automatically provides power to the undercabinet lighting assembly upon primary power failure.

25. The undercabinet lighting assembly according to claim 15, further comprising at least one continuous, encapsulating optical assembly operatively associated with the fixture housing which is selectively adjustable for focusing and dispersing the LED beam.

26. The undercabinet lighting assembly according to claim 25, wherein the optical assembly encapsulates at least one of the array of LEDs and is fixed and the array of LEDs serving as the light source is selectively moveable for focusing and dispersing the LED beam.

27. The undercabinet lighting assembly according to claim 15, further comprising a second plurality of LEDs for providing lower levels of illumination, the second plurality of LEDs being separate and distinct from the first plurality of LEDs, the second plurality of LEDs being operative in response to primary power failure.

28. The undercabinet lighting assembly according to claim 15, wherein the housing is formed from a flexible material.

29. An undercabinet lighting assembly comprising:

a housing;

a first plurality of white Light Emitting Diode (LED) and phosphor devices mounted within the housing forming at least one array of LEDs, the LEDs generating an LED beam directed towards an associated target area and serving as a light source, said plurality of devices being powered by an AC power source and a battery source upon failure of the AC power source;

an optical assembly located between said associated target area and said array of LEDs which is operatively associated with the housing for focusing and dispersing the LED beam to a desired light contour; and

a fixing apparatus disposed on a surface of the housing for attaching the undercabinet lighting assembly to an associated structure.